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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER				
SU, SARAH				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/518,264

Applicant(s)

OOMEN ET AL.

Examiner

Sarah Su

Art Unit

2131

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☒ Claim(s) 2-14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 December 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/S5108)
Paper No(s)/Mail Date 8/8/07
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-15 are presented for examination.

Priority

2. The claim for priority from PCT/IB03/02625 filed on 12 June 2003 is duly noted.
3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Objections

4. Claims 11-13 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 11 recites a computer program that performs the method of claim 1, but does not further limit the method set forth in claim 1. Similarly, claims 12 and 13 recite a record carrier that has a computer program as in claim 11 and a method of making available for download a program as set forth in claim 1. These claims do not further limit the computer program as recited in claims 1 and 11.
5. Claim 2-10, 14 are objected to because of the following informalities:
 - a. In claims 2-10, line 1: "a method" is unclear if it relates to "a method" (claim 1, line 1);
 - b. In claim 8, line 3: "the syntax description" lacks antecedent basis;

- c. In claim 8, line 5: "the decoder description" lacks antecedent basis;
- d. Claim 14 does not contain a proper transitional phrase. See MPEP 2111.03.

Appropriate correction is required.

Drawings

- 6. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).
- 7. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because:
 - a. reference characters "161", "162", ..., "168", "169" have been used to designate "respective computing stages" (page 2, line 33; Figure 2);
 - b. reference characters "260", "261", ..., "2631", "2632" have been used to designate "calculation units" (page 6, line 9; Figure 2).
- 8. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because:
 - a. they do not include the following reference sign(s) mentioned in the description: 200 (page 5, line 31);
 - b. they include the following reference character(s) not mentioned in the description: 280 (Figure 2).

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended

replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 101

9. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 11, 12 and 14 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 11 and 12 are drawn to a computer program per se. Computer programs claimed as computer listings per se are abstract instructions. Computer programs are neither computer components nor statutory processes, as they are not "acts" being performed. Such claimed computer programs do not define any structural and

functional interrelationships between the computer program and other claimed elements of a computer which permit the computer program's functionality to be realized. As such, these claims are not directed to one of the statutory categories of invention (See MPEP 2106.01), but are directed to nonstatutory functional descriptive material.

Please note that computer programs embodied on a computer readable medium or other structure, which would permit the functionality of the program to be realized, would be directed to a product and be within a statutory category of invention, so long as the computer readable medium is not disclosed as non-statutory subject matter per se (electromagnetic signals or carrier waves). In claim 12, though the computer program is given on a record carrier, the specification does not define "a record carrier", which can be interpreted as electromagnetic signals or carrier waves; therefore, claim 12 is also directed to nonstatutory subject matter.

Claim 14 is drawn to a signal per se. The hash signal claimed is not a process, machine, manufacture, or composition of matter and thus is considered non-statutory subject matter.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 1-4, 6, 8, 11-12, 14-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Iverson et al. (US Patent No. 5,852,664 and Iverson hereinafter).
12. As to claims 1-4, 6 and 8, Iverson discloses a system and method for decoding access control for encoded multimedia signals, the method having:

receiving a bit-stream comprising a compressed multimedia signal

[claim 1] (col. 4, lines 45-47, 49-52);

selectively reading from the bit-stream predetermined parameters

(i.e. checksum) [claim 1] (col. 3, lines 23-24);

deriving a hash function from the parameters [claim 1] (col. 6, lines 56-

64);

where the predetermined parameters relate to perceptual information

(i.e. encoded data for frame) **of the multimedia signal** [claim 2] (col. 3, lines 24-26);

where the multimedia signal comprises at least one of an audio signal, a video signal and an image signal [claim 3] (col. 9, lines 26-31);

where the multimedia signal has been compressed using at least one of transform encoding, subband encoding and parametric encoding [claim 4] (col. 6, lines 28-35);

analysing the received bit-stream in order to determine the decoding scheme used to compress the multimedia signal [claim 6] (col. 6, lines 38-42);

locating the predetermined parameters (i.e. checksum) within the bit-stream by using the syntax description (i.e. frame header) [claim 8] (col. 3, lines 23-24);

reading the located predetermined parameters [claim 8] (col. 3, lines 27-29);

decoding the predetermined parameter using the decoder description [claim 8] (col. 7, lines 51-53).

13. As to claims 11-12, 14-15, Iverson further discloses a system and method for decoding access control for encoded multimedia signals, the system having:

a computer program arranged to perform the method as claimed in claim 1 [claim 11] (col. 11, lines 32-34);

a record carrier having a computer program as claimed in claim 11 [claim 12] (col. 11, lines 32-34);

a hash signal representative of a multimedia signal, the hash signal having been generated by selectively reading predetermined parameters relating to perceptual properties of the multimedia signal (col. 3, lines 23-26) from a bit-stream comprising a compressed version of the multimedia signal [claim 14] (col. 4, lines 45-47, 49-52);

a receiver arranged to receive a bit-stream comprising a compressed multimedia signal [claim 15] (col. 4, lines 45-47, 49-52; 210, Figure 2);

a decoder (210) arranged to selectively read from the bit-stream predetermined parameters [claim 15] (col. 3, lines 23-24; 208, Figure 2);

a processing unit (270) arranged to derive a hash function from the parameters [claim 15] (col. 6, lines 56-64; 116, Figure 1; 306, Figure 3).

14. It is noted that in claims 6 and 15, they contain the phrases "in order to determine..." (claim 6, line 2) and "arranged to ..." (claim 15, lines 1, 3, 5, 7). These phrases recite intended use and are given little patentable weight.

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

17. Claims 5, 7, 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iverson in view of Haitsma et al (WO 02/065782 A1 and Haitsma hereinafter).

Although the method disclosed by Iverson shows substantial features of the claimed invention, it fails to disclose:

where the predetermined parameters relate to at least one of the energies of frequency bands; the amplitudes of frequency bands; the tonality of frequency bands; the luminance of an area of a video signal; and the chrominance of an area of a video signal [claim 5];

where the predetermined parameters relate to a first set of frequency bands [claim 9];

where the step of deriving the hash function comprises deriving estimates of values of spectral information present in a second set of frequency bands from the predetermined parameters, the hash function subsequently being calculated from the estimated value [claim 9];

where the multimedia signal is compressed using a parametric encoding scheme [claim 10];

where the predetermined parameters relate to at least one of the sinusoidal components, the noise components and the transient components utilised within the parametric scheme [claim 10].

Nonetheless, these features are well known in the art and would have been an obvious modification of the method disclosed by Iverson, as evidenced by Haitsma.

Haitsma discloses a method for generating and matching hashes of multimedia content, the method having:

where the predetermined parameters (i.e. properties) relate to at least one of the energies of frequency bands; the amplitudes of frequency bands; the tonality of frequency bands; the luminance of an area of a video signal; and the chrominance of an area of a video signal [claim 5] (page 2, lines 20-23) so that the parameters that can be used for processing are based on robust properties of a signal;

where the predetermined parameters relate to a first set of frequency bands [claim 9] (page 5, lines 15-17; page 6, lines 4-6) so that the set of bands can be processed according to characteristics specific to the content of those frequency bands;

where the step of deriving the hash function comprises deriving estimates of values of spectral information present in a second set of frequency bands from the predetermined parameters (page 6, lines 10-13), the hash function subsequently being calculated from the estimated value [claim 9] (page 6, lines 18-19) so that the hash function can be derived from a property that is robust to many kinds of processing;

where the multimedia signal is compressed (i.e. converted) using a parametric encoding scheme [claim 10] (page 5, lines 32-33) in order to give a smaller signal that requires less storage and processing time;

where the predetermined parameters relate to at least one of the sinusoidal components, the noise components and the transient components (i.e. energy, tonality, standard deviation of power spectral density)

utilised within the parametric scheme [claim 10] (page 5, lines 25-27) in order to perform processing based on robust characteristics of the signal.

Given the teaching of Haitsma, a person having ordinary skill in the art at the time of the invention would have readily recognized the desirability and advantages of modifying the method of Iverson with the method of Haitsma by using parameters of the signal that represent characteristics of the signal and using a signal that is compressed using parametric encoding so that the signal requires less storage and processing time and the results of processing with the parameters are robust.

Iverson in view of Haitsma does not expressly disclose:

where the analysing step comprises comparing the properties of the bit-stream with a database containing properties of a number of coding schemes [claim 7].

Haitsma further discloses **where the analysing step comprises comparing the properties of the bit-stream with a database containing** hash blocks (page 8, lines 3-6, 9-10), but does not expressly disclose that the database contains properties of coding schemes.

Given the teaching of Iverson in view of Haitsma, it would have been obvious to a person having ordinary skill in the art at the time the invention was made that the method of database matching disclosed in Haitsma can be performed using different types of data, including properties of coding schemes, with expected results. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention

was made to employ database matching using properties of coding schemes within the method of Iverson in view of Haitisma to obtain the claimed invention.

18. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Iverson in view of Powell (US 2001/0032189 A1).

Although the method disclosed by Iverson shows substantial features of the claimed invention, it fails to disclose:

**a method of making available for downloading a computer program
as claimed in claim 11.**

Nonetheless, this feature is well known in the art and would have been an obvious modification of the method disclosed by Iverson, as evidenced by Powell.

Powell discloses a method for cryptographically facilitating idea submission, purchase and licensing and innovation transfer, the method having:

**a method of making available for downloading a computer program
as claimed in claim 11 (0210, lines 8-20) in order to allow distribution of the
program.**

Given the teaching of Powell, a person having ordinary skill in the art at the time of the invention would have readily recognized the desirability and advantages of modifying the method of Iverson with the method of Powell by providing for a way to make the program available for download in order to make the program available to a plurality of potential users.

Prior Art Made of Record

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Bolle et al. (US Patent No. 6,675,174 B1) discloses a system and method for measuring similarity between a set of known temporal media segments and a one or more temporal media streams.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sarah Su whose telephone number is (571) 270-3835. The examiner can normally be reached on Monday through Friday 7:30AM-5:00PM EST..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (571) 272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2131

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sarah Su/

Examiner, Art Unit 2131

/Ayaz R. Sheikh/

Supervisory Patent Examiner, Art Unit 2131